November 14, 2024

Codexis Unveils Pioneering Enzymatic Synthesis Data to Enable the Future Manufacturing of RNAi Therapeutics

—Becomes first company to showcase four routes of synthesis for approved siRNA therapeutic asset—

—Joint poster with Bachem demonstrates superiority of Company's double-stranded RNA ligases compared to wild-type enzymes—

—Management to host conference call today at 4:30 pm EST to discuss data—

REDWOOD CITY, Calif., Nov. 14, 2024 (GLOBE NEWSWIRE) -- Codexis, Inc. (NASDAQ: CDXS), a leading provider of enzymatic solutions for efficient and scalable therapeutics manufacturing, today announced data from three presentations at the TIDES Europe annual meeting being held November 12-14, 2024, in Hamburg, Germany. The data demonstrate the Company's rapid advancement of its Enzyme Catalyzed Oligonucleotide (ECO) Synthesis™ manufacturing platform and establish Codexis' position at the forefront of enzymatic synthesis technology to enable to ongoing expansion of RNAi therapeutics.

Codexis Demonstrates First-ever Enzymatic Synthesis of Approved siRNA Therapeutic

During an oral Spotlight Presentation, Codexis unveiled the successful end-to-end enzymatic synthesis of an entire approved siRNA therapeutic asset, inclisiran. Codexis enzymatically synthesized the full-length sense and antisense strands of the molecule, including the enzymatic incorporation of a tissue-targeting moiety to the sense strand. To date, this process has only been completed utilizing phosphoramidite chemistry, a process that involves the use of harsh chemical conditions and vast amounts of toxic organic solvents. By contrast, Codexis' ECO Synthesis manufacturing platform operates under milder, aqueous conditions, that improves product quality and dramatically decreases chemical waste production.

In addition to this fully enzymatic route of synthesis, the Company demonstrated similar outcomes utilizing three routes of enzymatic ligation to produce the siRNA therapeutic asset, combining oligonucleotide fragments made by sequential enzymatic synthesis and traditional phosphoramidite chemistry. Key data from the presentation include:

- Achieved incorporation efficiency of >98% during sequential enzymatic oligo synthesis
- Successfully attached the tri-GalNAc tissue-targeting moiety by enzymatic ligation
- Obtained full-length oligonucleotides of equal quality and yields, using ligation of short fragments made with enzymes or by traditional phosphoramidite chemistry

Now that Codexis has successfully achieved this unprecedented milestone, the Company will continue to optimize its process for robustness, scaled-up quantities and improved purity

with the goal of providing customers with siRNA material of comparable or better quality to phosphoramidite chemistry. The Company anticipates ramping up manufacturing of siRNA in quantities for preclinical testing following the successful build out of its ECO Synthesis Innovation Lab at the end of this year.

Codexis Double-stranded RNA Ligase Demonstrates Superior Performance to Wild-type Enzymes

Two additional presentations focused on results of direct comparisons of Codexis' engineered double-stranded RNA (dsRNA) ligases and wild-type (WT) enzymes when used to combine short oligonucleotide fragments to synthesize full-length siRNA therapeutic compounds.

In a joint poster with Bachem, one of the world's leading CDMOs in oligonucleotide manufacturing, the data provided compelling external validation of the superior performance of Codexis ligases over existing wild-type enzymes in use today. Codexis enzymes demonstrated superior performance over wild-type enzymes across both volumetric productivity and substrate versatility. These dsRNA ligases outperformed on multiple substrate designs and enabled a higher conversion rate of oligonucleotide fragments into siRNA at increased concentrations of raw materials.

In a separate TIDES Talk presentation, Codexis demonstrated improved performance of its dsRNA ligase over WT enzymes based on real customer case studies executed through the Company's RNA Ligase Screening and Optimization Services, launched in May 2024. Codexis' engineered ligases delivered robust, in-process performance, including higher substrate loading, faster reaction times and improved conversation at elevated temperatures. These data demonstrate the Company's ability to accelerate delivery of lead ligase variants to customers and optimize process conditions for a customer's specific asset.

The slide decks from both presentations as well as the joint poster with Bachem are now available in the Investor Relations section the Codexis corporate website, www.codexis.com/investors.

Conference Call and Webcast

Codexis management will host a conference call beginning at 4:30 pm Eastern Time on Thursday, November 14, 2024, to discuss the data presented during the conference. The live call can be accessed by dialing 877-705-2976 (domestic) or 201-689-8798 (international). A live webcast to accompany the conference call can be accessed on the Codexis Investor Relations website, where a replay will be available for 90 days. A telephone replay of the call will be available for 48 hours by dialing 877-660-6853 (domestic) or 201-612-7415 (international), access ID #13726635.

About RNAi Therapeutics Manufacturing

Ribonucleic acid (RNA) as a therapeutic modality has gained tremendous traction in recent years with the growing number of messenger RNA (mRNA) vaccines and small interfering RNA (siRNA) candidates advancing in clinical studies. However, large-scale production of RNA interference (RNAi) therapeutics using traditional chemical synthesis faces complex challenges in nucleic acid quality and quantity, as well as overall economics. With over 450 RNAi therapies currently in clinical development, including more than 40 assets in Phase 2 and Phase 3 clinical trials targeting disease indications impacting millions of patients, RNAi

therapeutic demand is projected to outpace current production capabilities by the end of the decade.

About the ECO Synthesis Manufacturing Platform

Codexis' proprietary Enzyme Catalyzed Oligonucleotide (ECO) Synthesis™ manufacturing platform is being designed to address scalability and cost limitations by potentially enabling the commercial-scale manufacture of RNAi therapeutics through an enzymatic route. The Company presented groundbreaking data at the TIDES USA 2024 annual meeting demonstrating the enzymatic synthesis of a full-length sense strand of the oligonucleotide lumasiran, a commercially available siRNA therapeutic, as well as shorter sense strand fragments of a second siRNA therapeutic asset, givosiran. The data demonstrate that Codexis consistently achieved coupling efficiency greater than 98%, which is equivalent to what is seen with phosphoramidite chemistry; executed the enzymatic addition of a conjugation moiety to the lumasiran strand; and confirmed the lack of notable impurities typically observed in oligonucleotide synthesis via phosphoramidite chemistry. A recording of the presentation, along with slides and the data press release, can be found on the Codexis corporate website.

About Codexis

Codexis is a leading provider of enzymatic solutions for efficient and scalable therapeutics manufacturing that leverages its proprietary CodeEvolver® technology platform to discover, develop and enhance novel, high-performance enzymes and other classes of proteins. Codexis enzymes solve for real-world challenges associated with small molecule pharmaceuticals manufacturing and nucleic acid synthesis. The Company is currently developing its proprietary ECO Synthesis™ manufacturing platform to enable the scaled manufacture of RNAi therapeutics through an enzymatic route. Codexis' unique enzymes can drive improvements such as higher yields, reduced energy usage and waste generation, improved efficiency in manufacturing and greater sensitivity in genomic and diagnostic applications. For more information, visit https://www.codexis.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. In some cases, you can identify forward-looking statements by terminology such as "aim," "anticipate," "assume," "believe," "contemplate," "continue," "could," "design," "due," "estimate," "expect," "goal," "intend," "may," "objective," "plan," "positioned," "potential," "predict," "seek," "should," "suggest," "target," "on track," "will," "would" and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology. To the extent that statements contained in this press release are not descriptions of historical facts, they are forward-looking statements reflecting the current beliefs and expectations of management, including, but not limited to, the ability of an enzymatic oligonucleotide synthesis process to complement, replace or improve upon traditional chemical synthesis; the potential of the Company's ECO Synthesis™ platform and double-stranded RNA (dsRNA) ligase screening and optimization services to meet customers' needs and to create value for Codexis and its customers by enabling commercial-scale manufacture of RNAi therapeutics; completion of the ECO Synthesis Innovation Lab by the end of 2024, and other anticipated technical and commercial milestones related to the ECO Synthesis™ platform and the dsRNA ligase program, and public announcements related thereto; ability of the

Company to obtain new development collaborators on its ECO Synthesis technology; the potential for the Company's dsRNA ligases to have improved scalability and reduced manufacturing costs compared to wild types or non-ligation methods; potential details and features of the ECO Synthesis™ platform such as it being scalable and able to reduce manufacturing costs, as well as having higher quality, purity and yield, and improved sustainability than existing methods; and the future demand for RNAi therapeutics. You should not place undue reliance on these forward-looking statements because they involve known and unknown risks, uncertainties and other factors that are, in some cases, beyond Codexis' control and that could materially affect actual results. Factors that could materially affect actual results include, among others: Codexis' dependence on its licensees and collaborators; if any of its collaborators terminate their development programs under their respective license agreements with Codexis; Codexis may need additional capital in the future in order to expand its business; if Codexis is unable to successfully develop new technology such as its ECO Synthesis™ manufacturing platform and dsRNA ligase; Codexis' dependence on a limited number of products and customers, and potential adverse effects to Codexis' business if its customers' products are not received well in the markets; whether the end markets for Codexis' customers' products develop and remain viable; if competitors and potential competitors who have greater resources and experience than Codexis develop products and technologies that make Codexis' products and technologies obsolete; Codexis' ability to comply with debt covenants under its loan facility; if Codexis is unable to accurately forecast financial and operational performance; and market and economic conditions may negatively impact Codexis business, financial condition and share price. Additional information about factors that could materially affect actual results can be found in Codexis' Annual Report on Form 10-K for the year ended December 31, 2023 filed with the Securities and Exchange Commission ("SEC") on February 28, 2024 and in Codexis' Quarterly Report on Form 10-Q for the quarter ended September 30, 2024 filed with the SEC on October 31, 2024, including under the caption "Risk Factors," and in Codexis' other periodic reports filed with the SEC. Codexis expressly disclaims any intent or obligation to update these forward-looking statements, except as required by law.

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